

Research on Profit Models and Platform Construction for Digital Journal Publishing (Post-print)

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Date: 2023-10-08T00:00:00+00:00

Abstract

With the rapid development of Internet and mobile Internet technologies, digital journal publishing has achieved swift growth, with its profit models continuously transforming and innovating. This paper comprehensively analyzes various profit models representing the development trends of the digital journal publishing industry, investigates the construction models and strategies of digital journal publishing platforms, and holds certain practical significance and value for promoting sustainable development of digital publishing, implementing the national big data strategy, and accelerating the construction of Digital China.

Full Text

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Abstract: With the rapid development of Internet and mobile Internet technologies, digital journal publishing has achieved tremendous growth, and its profit models are continuously evolving and innovating. This paper comprehensively analyzes various profit models representing the development trends of the digital journal publishing industry, and examines the construction models and strategies for digital journal publishing platforms. This research holds practical significance and value for promoting the sustainable development of digital publishing, implementing the national big data strategy, and accelerating the construction of a digital China.

Keywords: digital journal publishing; profit model; platform construction model; platform construction strategy

Classification Number: G230.7

Document Code: A

Article ID: 1671-0134(2018)02-108-03

DOI: 10.19483/j.cnki.11-4653/n.2018.02.044

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In recent years, the increasingly widespread application of the Internet has fundamentally transformed people's reading habits. This is particularly true for the new generation of readers who have grown up alongside the Internet, as they appreciate the speed and rich multimedia capabilities of digital platforms. Against this backdrop, an entirely new consumption pattern for digital journals has gradually emerged. The development of digital journal publishing models aligns with China's national digitalization strategy and represents a strategic initiative critical to the long-term development of the publishing industry. There has been a renewed understanding of the concepts and theories underlying digital journal publishing, with policy support provided for journal publishing in certain regions, leading to rapid development trends and promising performance. For instance, Chinese databases such as CNKI and VIP are integrated platforms for academic journal digitalization. Taking CNKI as an example, through long-term development and improvement, it has incorporated extensive resources including magazines, doctoral dissertations, foreign literature, and conference papers, forming a comprehensive data platform that aggregates vast amounts of resources. The formation of such digital integration platforms has provided human and material resources for China's journal digitalization, expanded distribution channels, and accelerated the digital transformation of Chinese journals.

2.1 Advertising Profit Model

In digital journal publishing, the advertising profit model refers to publishers providing free or low-cost content to users while generating profits from third parties. This approach somewhat resembles traditional newspaper and periodical profit models, primarily using content as the core to attract reader interest and generate reading behavior, thereby obtaining advertising placement value and achieving profitability. The advertising in this model includes two types: first, advertisements that are inherent to the digital journal publication itself and can integrate seamlessly with journal content, forming an indispensable part of the content; second, advertisements on journal publishing websites. Practice has proven that most digital journal publishing currently employs advertising placement models.

For the digital transformation of journals, the most effective method is the transition from traditional print journals to digital formats, which involves transferring published print journals to the Internet to create digital versions resembling their print counterparts. Under this model, readers can register accounts and pay corresponding fees to access and download journal content. Analysis of China's current journal development status reveals that many journals have established their own websites and achieved digital transformation, facilitating

online reading for readers.

1.2 Formation of Pure Electronic Journals

Pure electronic journals primarily refer to publications that completely break away from the constraints of traditional print journals, integrating processes such as topic selection, manuscript solicitation, peer review, editing, and retrieval to achieve publication and distribution. These processes must be completed in cyberspace, which serves as the most effective distribution channel. For example, several years ago, China's Ministry of Education issued the first pure electronic journal with an official publication number, *China Sciencepaper Online Premium Papers*, which features prominent open-access characteristics. This model not only accelerates publication speed but also assists readers in paper retrieval, controls purchasing costs for readers, and promotes communication among various stakeholders, representing a formal reform of digital journals.

1.3 Digital Journal Platforms

Both print journals and pure electronic journals emerge from publishers' digital journal activities, while digital journal platforms achieve classification and sales of academic journal content by purchasing electronic copyrights of print journals. The China Academic Journal Network Database, China Premium Popular Science Journal Literature Database, and over ten other literature databases each contain tens of thousands of articles, with regular and comprehensive updates. Meanwhile, electronic journal platform information resource libraries can provide information resource services to third parties, expanding business breadth and depth. Under the premise of detection and statistics, they collect and organize user information such as reading rates, average reading time, user age, and journal download volume, thereby establishing databases and achieving business value addition. The information in these databases can be continuously updated to provide readers with higher-quality services [2].

2.2.1 Direct Sales Model

Currently, most print media have recognized the importance of websites and have established official platforms to transfer print journal content to web-based carriers. This approach aligns with contemporary development trends and provides convenience for users. For example, the "Zhiyin Online Reading" channel on the Zhiyin Media Group website allows users to view the latest and recent issues of *Zhiyin* magazine. Users can purchase Zhiyin coins through recharge to buy reading access to print or electronic magazines, or even purchase single-article access rights. This model eliminates third-party profit sharing but requires substantial technical investment. For publishing units with numerous subsidiary publications, this model offers certain feasibility [1].

2.2.2 Paid Downloads and Subscriptions Through Cooperation

Traditional journal publishers possess advantages in processing and production, enabling the digital conversion of print journals and gradually moving toward online sales. On one hand, publishers collaborate with technology service providers, supplying content information for them to digitize and also serve as sales agents, with final profits split equally between sellers and print journal publishers. China's most prominent Internet publishers include CNKI, Wanfang, VIP, and Longyuan. Among them, CNKI holds the largest market share with strong revenue-generating capabilities, while Longyuan Journal Network has developed rapidly in recent years, signing contracts with over 3,000 journal brands covering literature, history, philosophy, economics, current affairs, party building, and many other fields to meet diverse reader needs. Longyuan has also explored suitable business models and complete transaction settlement methods. Its revenue sources include user subscriptions, advertising, and value-added services, with personalized packages tailored for different groups based on reading preferences and habits. Longyuan has additionally launched mobile WAP and APP versions, allowing readers to subscribe to and receive favorite journals via wireless networks. Longyuan's revenues must be shared with journal publishers and telecommunications operators.

2.2.3 Service Profit Model

The service profit model primarily refers to profit generation through various value-added services provided by publishers to readers. In terms of service profitability, educational and professional journals are the leaders, mainly because their professional and resource advantages are more pronounced, allowing them to maintain service quality while generating profits through online database and search services. The publishing activities of journal Internet publishers have transformed the traditional single-profit model of publishers. Beyond journal digitalization, they also comprehensively process literature and information resources to create databases containing vast amounts of information, where electronic documents are properly tagged for rapid extraction and regenerated display according to requirements. For instance, professional publishing forms including CNKI and Wanfang journals leverage database resources to generate profits. CNKI's integrated resources are particularly comprehensive and effective, having signed contracts with over 9,000 Chinese journals containing more than 30 million documents.

3.1 Cooperative Construction Model

In the cooperative construction model, platforms collaborate with domestic and foreign online manuscript processing platforms and publishing software to build exclusive academic journal digital publishing platforms through personalized service settings. This model has successful precedents. For example, Springer Link integrates the online management processing platform with Aries Systems' technology, which provides "Online Peer Review Systems" and "Editorial Man-

agement Systems,” and signed a contract with third-party online publishing company Meta Press in 2003 to establish an online publishing service standard platform. This model has both advantages and disadvantages. Advantages include leveraging advanced experiences from third-party platform providers domestically and internationally to facilitate platform establishment, and performing system maintenance with third-party technical support without requiring internal resources. Disadvantages include prominent system compatibility issues, with third-party publishing platforms experiencing incompatibility in Chinese-English recognition and related functions during operation. Platform intellectual property rights primarily belong to third-party publishing companies, weakening and limiting platform autonomy. When functional problems occur in third-party products, they negatively impact the platform and cause serious economic losses. For example, the collapse of the Paper Path platform forced its cooperative partners to seek new collaborators or develop entirely new systems.

3.2 Independent Construction Model

The independent construction model refers to developing new academic journal digital publishing platforms by drawing on successful domestic and foreign experiences, incorporating unique features into platform structure, functional settings, and content organization. This operational model is relatively common, including platforms such as ScienceDirect and HighWire, which are self-developed platforms capable of achieving collaborative editing in practice. They integrate digital publishing, digital distribution, and digital services, enabling collaborative cooperation across all stages with smooth data conversion, aligning with the goals of integrated journal product construction. However, this model also has drawbacks: it requires continuous substantial investment in human, material, and financial resources for system development, iteration, and later-stage operations. It also challenges user habits, requiring users to completely change habits formed on previous platforms. If users continue with previous data retrieval and analysis habits, they will not obtain satisfactory service results, and personalized service quality will be significantly compromised. Precisely because of these deficiencies in the independent construction model, some journal digital publishing platforms actively seek cooperation, such as the strategic partnership between Wanfang and Qinyun Company in building a network publishing alliance platform.

4.1 Emphasizing Personalized Services

Domestic and international journal digital publishing platforms possess service advantages and can provide personalized services according to user needs—this represents the development direction of such platforms. Compared with traditional publishing, the greatest advantage of digital journal publishing lies in its emphasis on personalized services, primarily involving personal information storage, customized services, and retrieval habit preservation, all of which are

means for platforms to attract and retain users. China's three major platforms have substantial content overlap, and users' platform selection depends mainly on whether personalized services meet their needs. For example, CNKI integrates various data resources based on unified navigation, unified metadata, unified search methods, and unified CNKI nodes (knowledge network nodes) to form diverse literature publication databases. Simultaneously, it provides intelligence service platforms and resource ordering platforms for users. Tailored to user industry types and interests, CNKI has launched over ten different types of digital libraries, including university institutional libraries, hospital institutional libraries, and primary/secondary school personal libraries, allowing users to select appropriate resource databases according to their characteristics and needs. CNKI's personalized services also include regular push notifications, journal customization, search result storage, and frequently-used journal storage, all of which increase user trust in the platform.

4.2 Enhancing Knowledge Search Functionality

Knowledge search represents the intelligent stage of search engine development. It is a search engine built on explicit knowledge sources that returns appropriate knowledge results based on clear user identities and demands. It emphasizes knowledge accuracy and standardization, and stresses self-learning of search results through interactive mechanisms such as evaluation, communication, modification, and maintenance to achieve intelligent knowledge search. The domestic representative is CNKI, currently the largest knowledge search engine based on Internet publishing. When performing knowledge searches, CNKI leverages existing resources to build databases, mining data resources for term retrieval, sentence retrieval, citation retrieval, and translation searches of conceptual definitions in journal articles. Additionally, it provides knowledge Q&A, image retrieval, index retrieval, and reference book searches, offering users tremendous convenience. Knowledge search has become an indispensable component of future journal digital publishing platforms and requires focused attention during platform construction.

4.3 Optimizing Metadata Processing

For content on journal digital publishing platforms to be discovered and cited, it is essential to strengthen seamless linking with international third-party platforms, with the most critical aspect being proper metadata processing. For current platforms, metadata includes: Dublin Core metadata for Internet access or entry into open databases; CrossRef for cross-referencing; MARC for importing library data; and RSS for clustered news customization. To improve integration with international platforms, platform construction must emphasize close cooperation with third-party platforms and increased support for metadata databases.

4.4 Highlighting Web2.0 Concepts and Technology

The Web2.0 concept emphasizes user participation. Both domestic and foreign platforms have incorporated Web2.0 thinking. For example, CNKI's knowledge search adds Web2.0 user participation to academic definitions and translation searches, allowing users to directly evaluate and score translation quality, make modifications if dissatisfied, and store them in corresponding databases. If users remain unsatisfied with search results, they can also provide feedback links. Therefore, when constructing journal digital publishing platforms, it is essential to highlight Web2.0 concepts and technology, emphasizing technological applications in platforms to align with future user service development trends.

4.5 Strengthening Cooperation with External Platforms

As network platforms, journal digital publishing platforms inevitably cooperate with external institutions in the complex network environment. To promote platform construction, efforts should focus on strengthening external platform cooperation to achieve complementarity and optimization. For example, through cooperation with third-party search result processing software, China Wanfang can import search results into users' reference management software; China's VIP platform has cooperated with Tencent to develop QQ-based journal resource retrieval.

4.6 Prioritizing Value-Added Services Such as Statistical Analysis

Drawing on the successful experience of Elsevier's ScienceDirect international academic publishing platform, platforms should expand from simple literature services to search result statistics and analysis, promoting the evolution from single literature services to a "literature services + value-added services" model. This primarily involves cross-referencing, related literature recommendations, multiple result processing formats, and full-text linking—representing the future competitive direction of journal digital publishing platform construction. Through the establishment and expansion of value-added services, platforms can continuously enhance their added value, move toward diversified services, and promote the sustainable and healthy development of journal digital publishing platforms.

In 2016, China's digital publishing industry generated total revenue of 572.085 billion yuan, representing a 29.9% increase from 2015 and demonstrating sustained growth. Among this, Internet journal revenue reached 1.75 billion yuan, while the combined revenue of Internet journals, e-books, and digital newspapers totaled 7.85 billion yuan, a 5.44% increase from 2015. This accounted for 1.37% of total digital publishing revenue, continuing a decline from 1.69% in 2015 and 2.06% in 2014 [3]. This indicates that traditional publishing units still need to accelerate digital transformation, upgrading, and integrated development, requiring faster product development and market application. Digital publishing platform construction represents an effective path for resource integration

and collaborative development. By focusing on personalized services, enhancing knowledge search functionality, optimizing metadata processing, highlighting Web2.0 concepts and technology, cooperating with external platforms, and prioritizing value-added services such as statistical analysis, journal digital publishing platforms can be constructed and upgraded to deepen transformation in accordance with the national big data strategy and the goal of accelerating digital China construction, thereby generating greater social and economic benefits for journal digital publishing.

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Source: ChinaXiv — Machine translation. Verify with original.